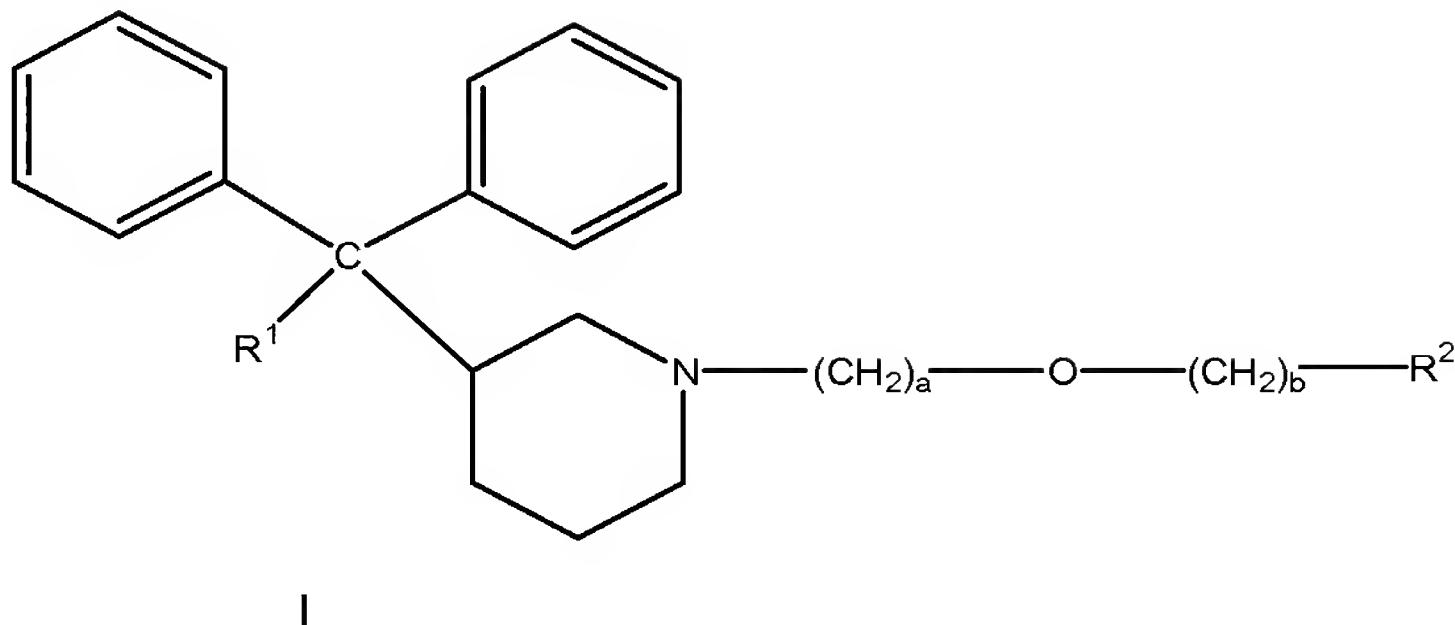


We claim:

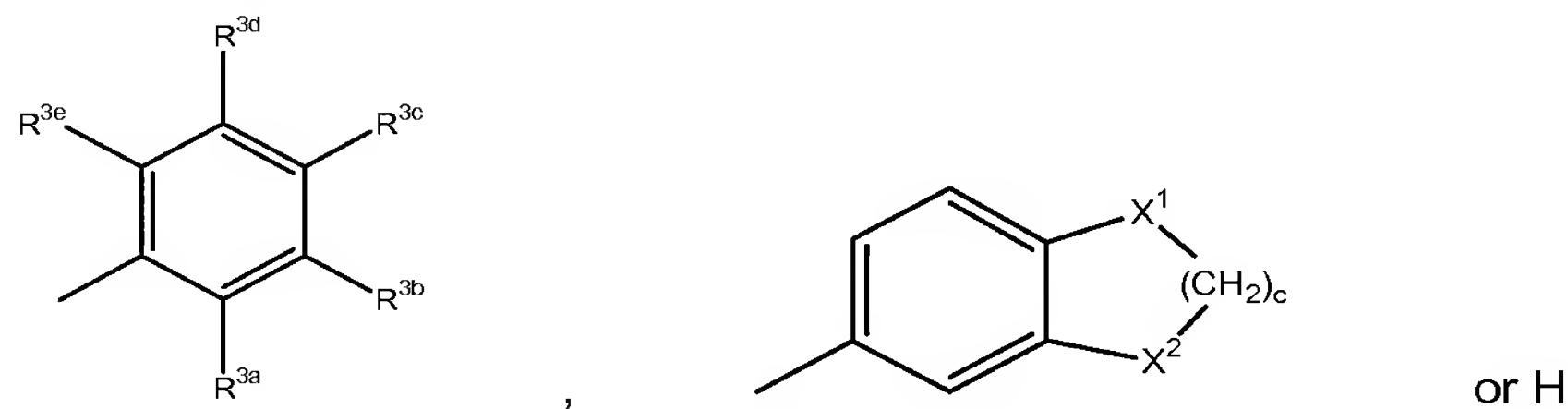
1. A compound of Formula I:



5 wherein:

$R^1$  is  $-CN$  or  $-CONR^4R^5$ ;

$R^2$  is  $C_1-C_4$  alkyl,  $C_3-C_6$  cycloalkyl,  $C_3-C_6$  heterocycloalkyl,  $C_6-C_{14}$  aryl, or a group of the formula:



10  $R^{3a}$ ,  $R^{3b}$ ,  $R^{3c}$ ,  $R^{3d}$  and  $R^{3e}$  are each independently H,  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy,  $-(CH_2)_dOH$ , halo, trifluoromethyl, cyano,  $-(CH_2)_dNR^6R^7$ ,  $-CO(C_1-C_4$  alkyl),  $-OCO(C_1-C_4$  alkyl),  $-CH(OH)(C_1-C_4$  alkyl),  $-C(OH)(C_1-C_4$  alkyl) $_2$ ,  $-SO_2NH_2$ ,  $-(CH_2)_dCONR^8R^9$  or  $-(CH_2)_dCOO(C_1-C_4$  alkyl);

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are each independently H or  $C_1-C_4$  alkyl;

15 Het is pyridyl, pyrazinyl or thienyl;

a is 1, 2, 3 or 4;

b is 1, 2 or 3;

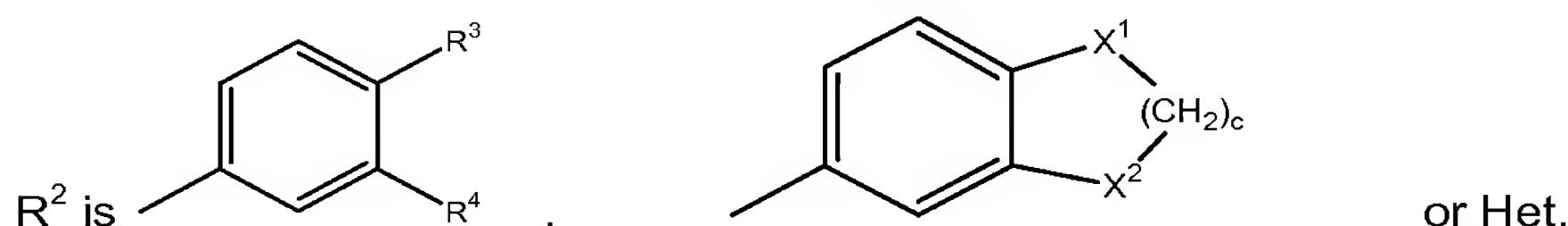
c is 1, 2 or 3;

d is 0, 1 or 2; and

20  $X^1$  and  $X^2$  are each independently  $CH_2$  or O;

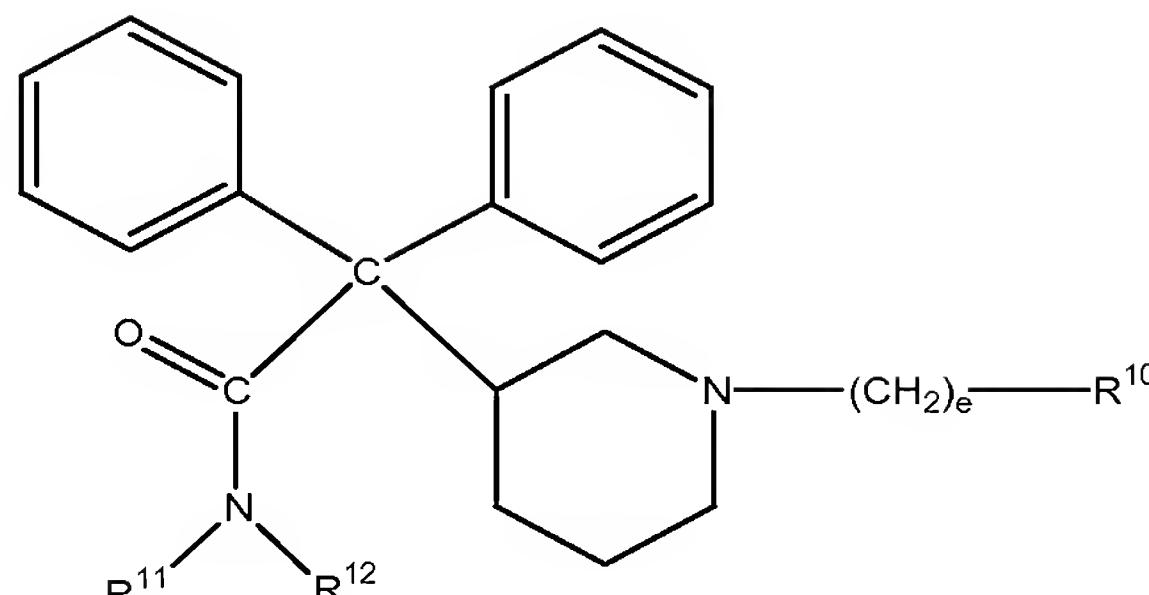
or a pharmaceutically acceptable salt or solvate thereof.

2. A compound according to claim 1 wherein:



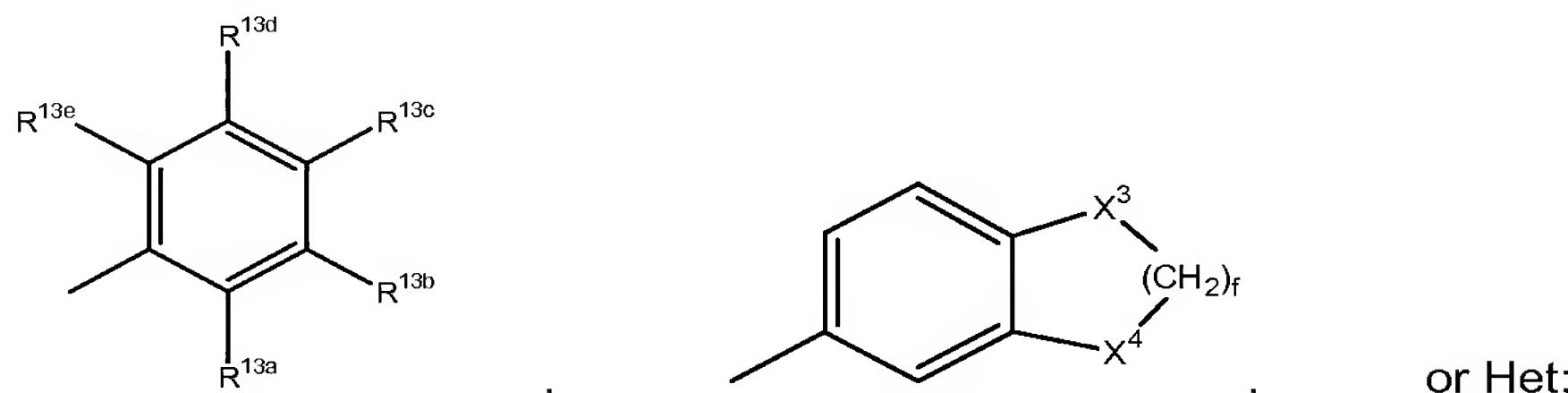
25

3. A compound of Formula II:



II

wherein:

5       $R^{10}$  is a group of the formula:R<sup>11</sup> and R<sup>12</sup> are each independently H or C<sub>1</sub>-C<sub>4</sub> alkyl, with the proviso that R<sup>11</sup> and R<sup>12</sup> are not both H;10      R<sup>13a</sup>, R<sup>13b</sup>, R<sup>13c</sup>, R<sup>13d</sup>, and R<sup>13e</sup> are each independently H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, -(CH<sub>2</sub>)<sub>g</sub>OH, halo, trifluoromethyl, cyano, -(CH<sub>2</sub>)<sub>g</sub>NR<sup>14</sup>R<sup>15</sup>, -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -OCO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CH(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl), -C(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -(CH<sub>2</sub>)<sub>g</sub>CONR<sup>16</sup>R<sup>17</sup> or -(CH<sub>2</sub>)<sub>g</sub>COO(C<sub>1</sub>-C<sub>4</sub> alkyl);R<sup>14</sup>, R<sup>15</sup>, R<sup>16</sup> and R<sup>17</sup> are each independently H or C<sub>1</sub>-C<sub>4</sub> alkyl;

Het is pyridyl, pyrazinyl or thieryl;

15      e is 1, 2 or 3;

f is 1, 2 or 3;

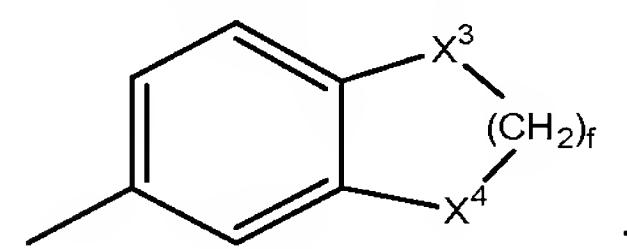
g is 0, 1 or 2; and

X<sup>3</sup> and X<sup>4</sup> are each independently CH<sub>2</sub> or O;

or a pharmaceutically acceptable salt or solvate thereof.

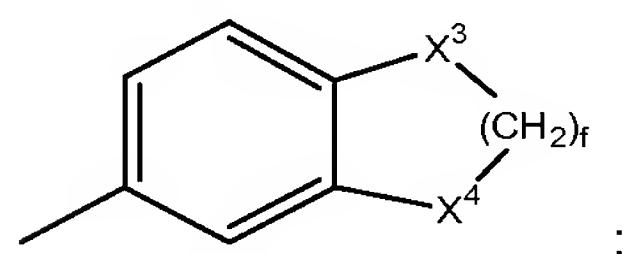
20

4.      A compound according to claim 14 wherein:

 $R^{10}$  is a group of the formula:X<sup>3</sup> is O; and25      X<sup>4</sup> is CH<sub>2</sub>.

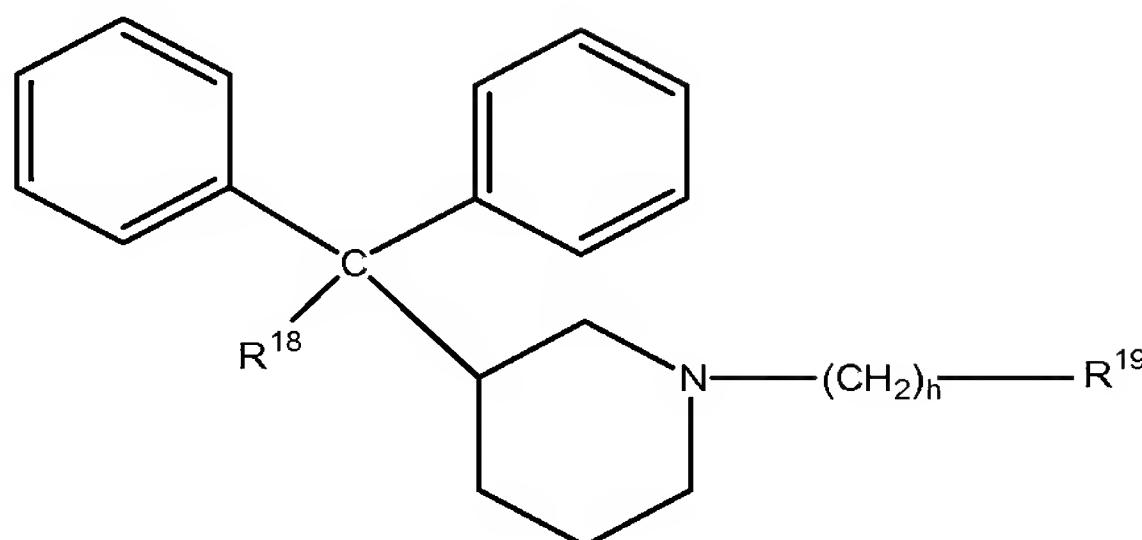
5. A compound according to claim 14 wherein:

$R^{10}$  is a group of the formula:



5                     $X^3$  is  $CH_2$ ; and  
 $X^4$  is  $O$ .

6. A compound of Formula III:



10                    III

wherein:

$R^{18}$  is  $-CN$  or  $-CONR^{20}R^{21}$ ;

$R^{19}$  is  $C_3$ - $C_6$  cycloalkyl,  $C_3$ - $C_6$  heterocycloalkyl or  $(C_6$ - $C_{14}$  aryl)- $(C_1$ - $C_4$  alkyl) $_v$ ;

$R^{20}$  and  $R^{21}$  are each independently  $H$  or  $C_1$ - $C_4$  alkyl;

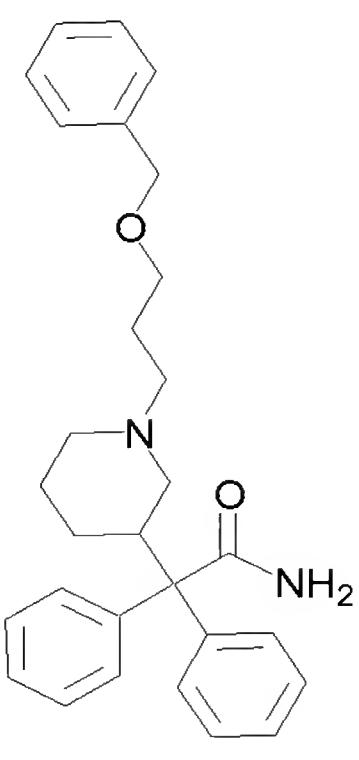
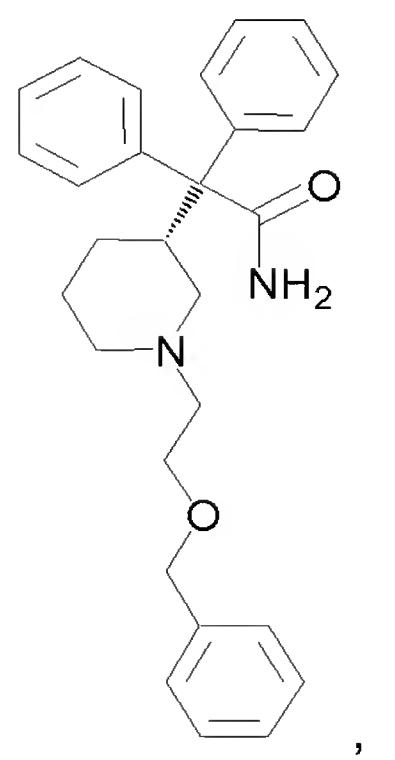
15                     $h$  is 1, 2, 3 or 4; and

$v$  is 0, 1 or 2;

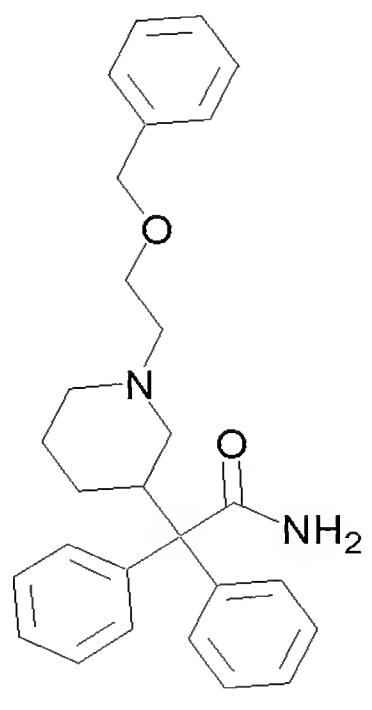
or a pharmaceutically acceptable salt or solvate thereof.

7. A compound selected from:

20

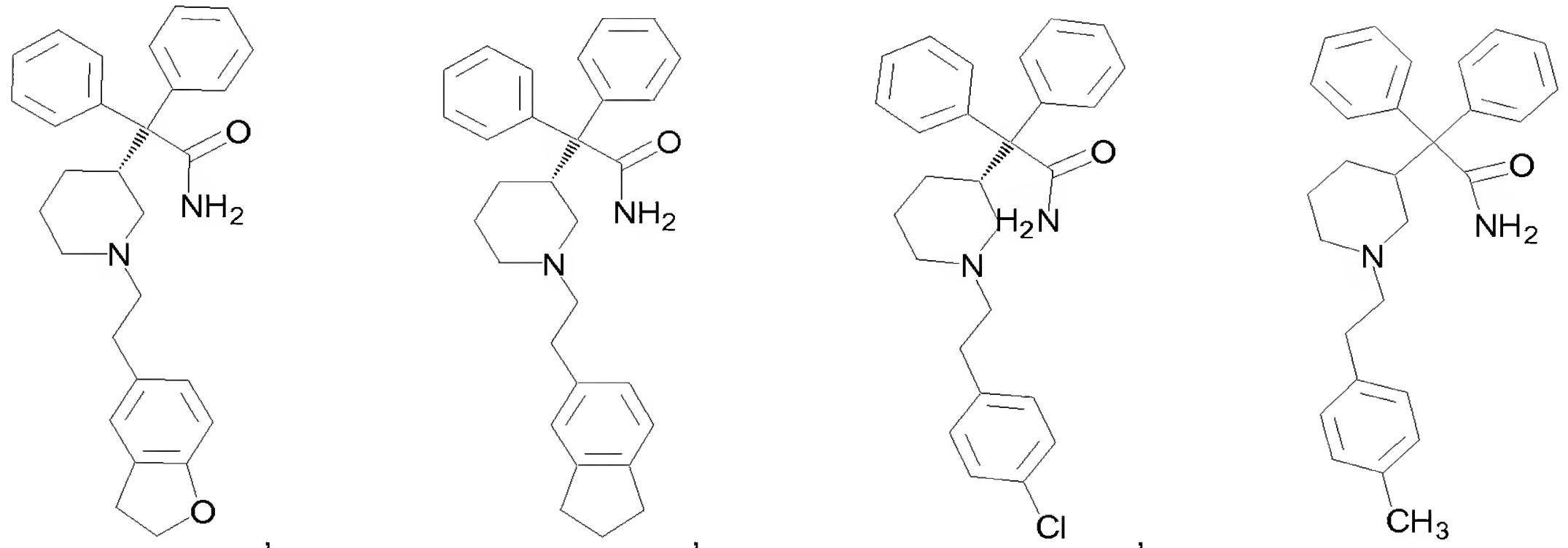


and

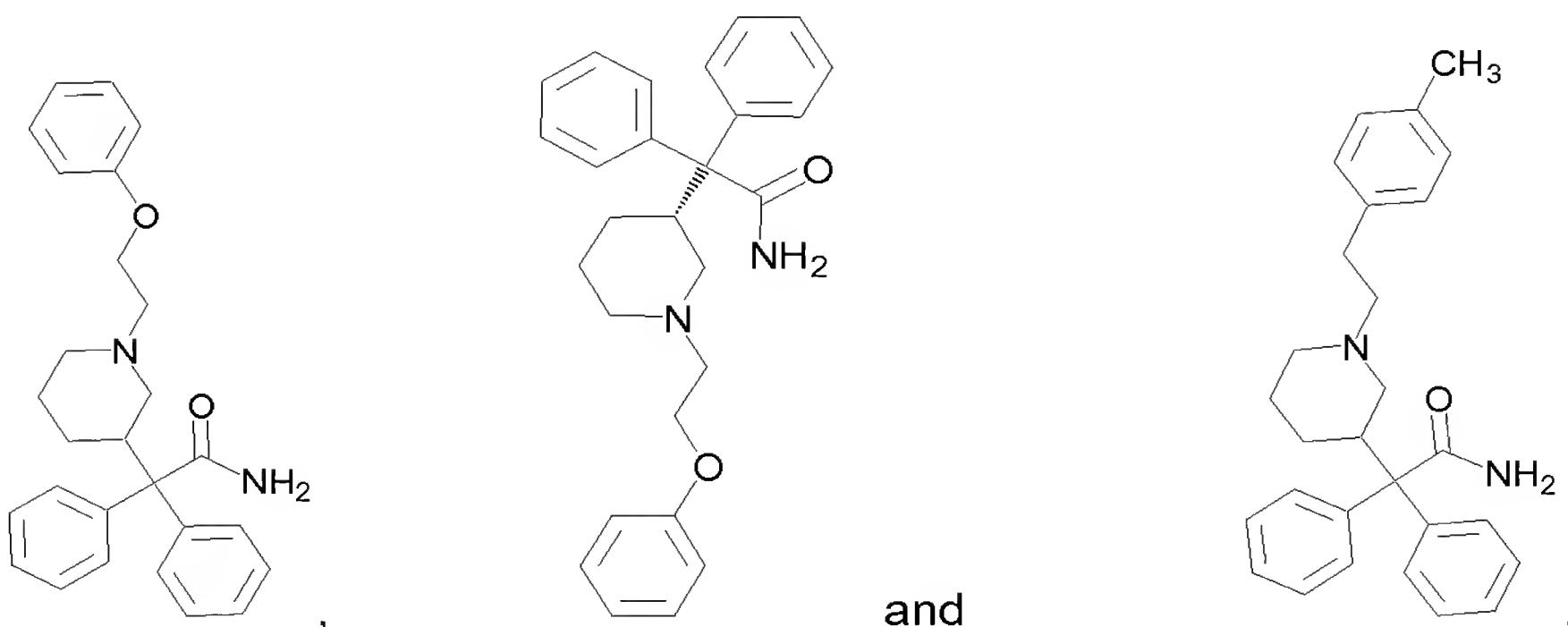


or a pharmaceutically acceptable salt or solvate thereof.

8. A compound selected from:

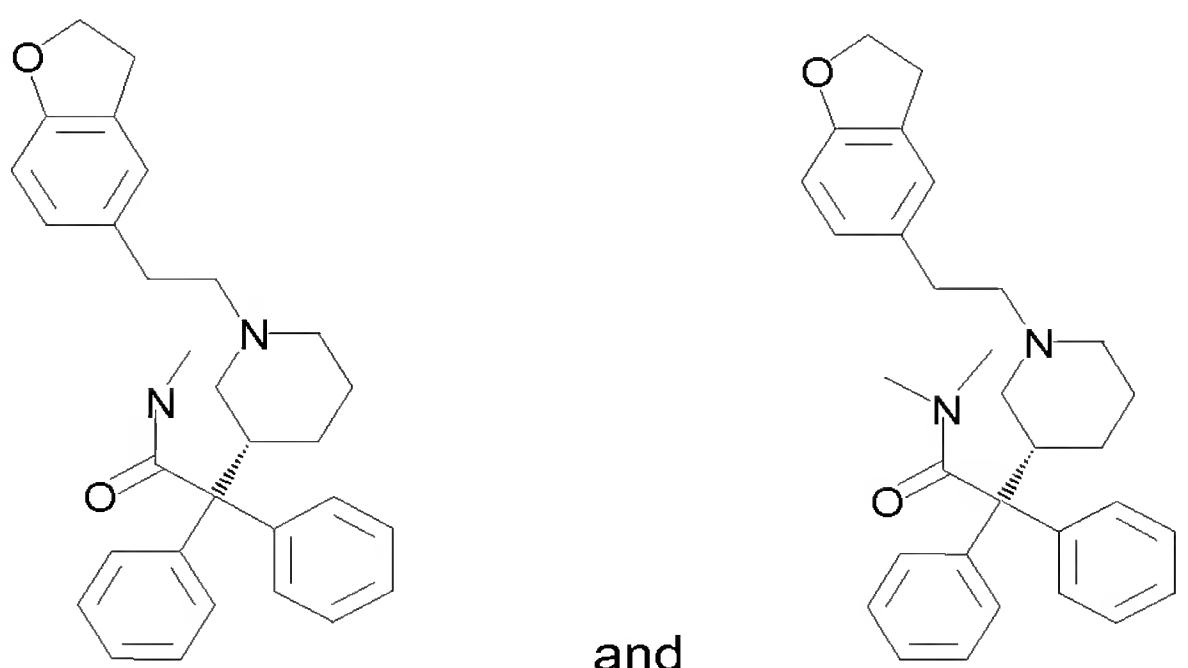


5



or a pharmaceutically acceptable salt or solvate thereof.

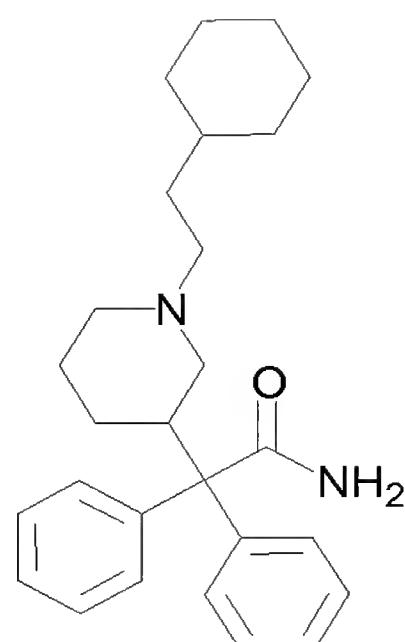
10 9. A compound selected from:



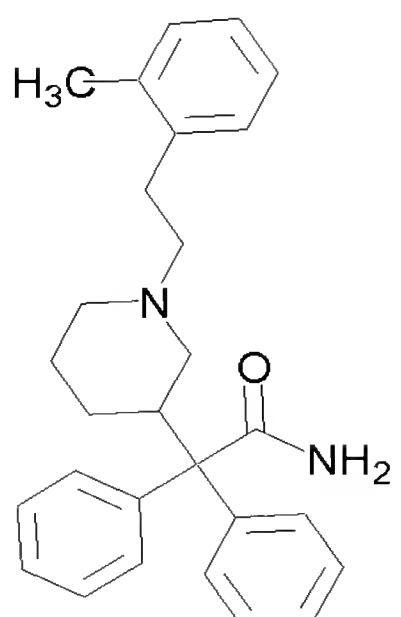
or a pharmaceutically acceptable salt or solvate thereof.

15

10. A compound selected from:

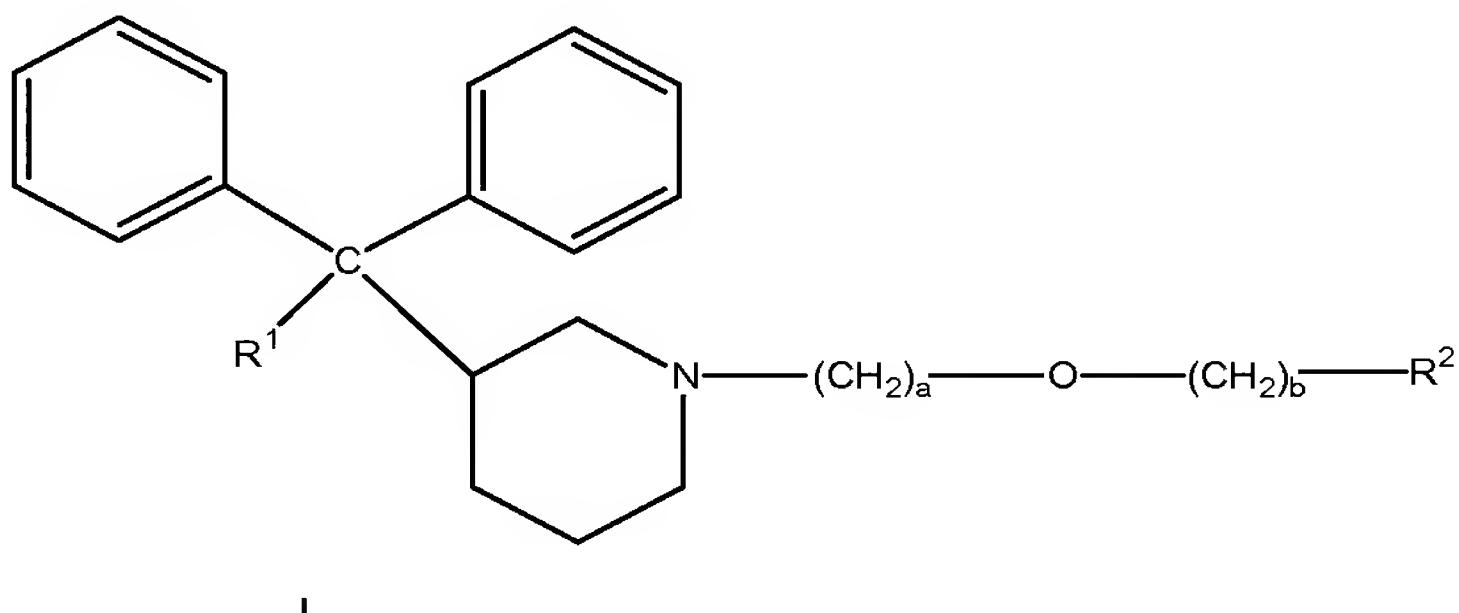


and



or a pharmaceutically acceptable salt or solvate thereof.

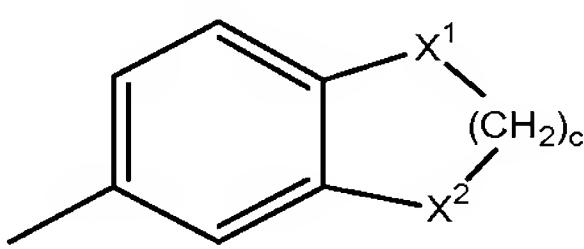
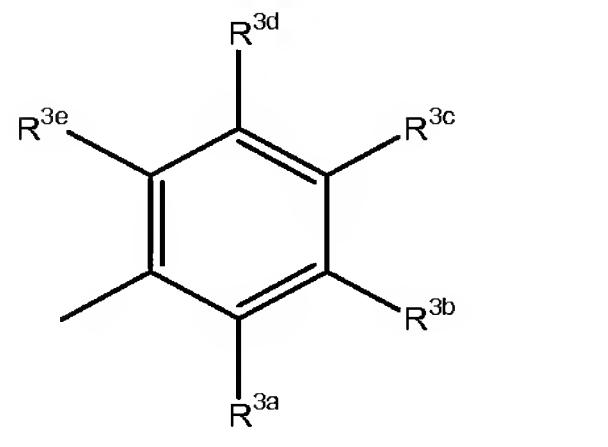
5 11. A method of treating a mammal infected with human immunodeficiency virus (HIV) comprising administering to said mammal an effective amount of a compound of Formula I:



I

wherein:

10  $R^1$  is  $-CN$  or  $-CONR^4R^5$ ;  
 $R^2$  is  $C_1-C_4$  alkyl,  $C_3-C_6$  cycloalkyl,  $C_3-C_6$  heterocycloalkyl,  $C_6-C_{14}$  aryl, or a group of the formula:



or Het;

15  $R^{3a}$ ,  $R^{3b}$ ,  $R^{3c}$ ,  $R^{3d}$  and  $R^{3e}$  are each independently  $H$ ,  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy,  $-(CH_2)_dOH$ , halo, trifluoromethyl, cyano,  $-(CH_2)_dNR^6R^7$ ,  $-CO(C_1-C_4\text{ alkyl})$ ,  $-OCO(C_1-C_4\text{ alkyl})$ ,  $-CH(OH)(C_1-C_4\text{ alkyl})$ ,  $-C(OH)(C_1-C_4\text{ alkyl})_2$ ,  $-SO_2NH_2$ ,  $-(CH_2)_dCONR^8R^9$  or  $-(CH_2)_dCOO(C_1-C_4\text{ alkyl})$ ;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are each independently  $H$  or  $C_1-C_4$  alkyl;

Het is pyridyl, pyrazinyl or thienyl;

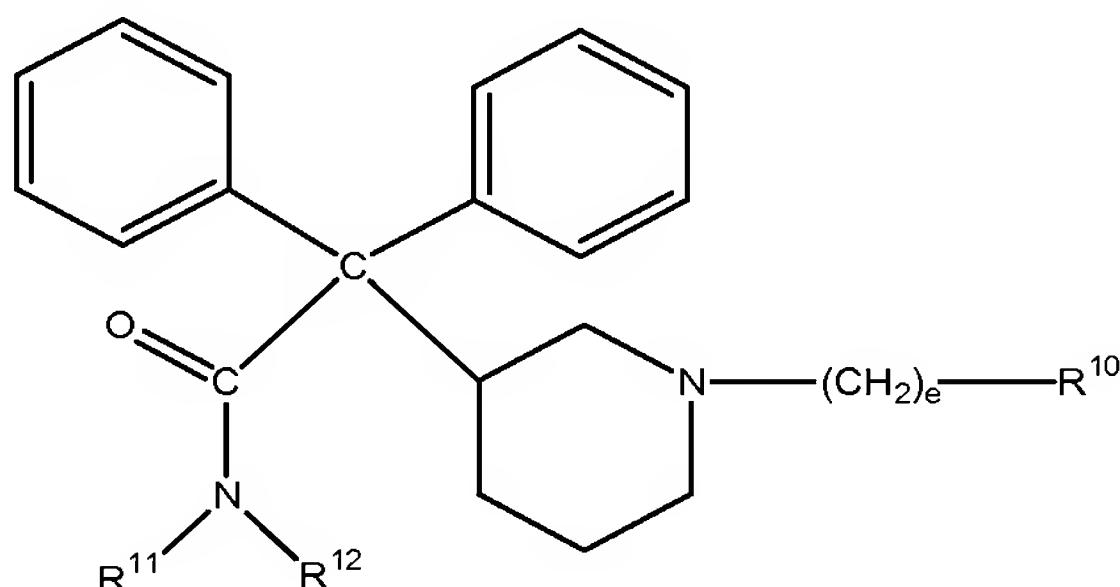
20  $a$  is 1, 2, 3 or 4;

$b$  is 1, 2 or 3;

c is 1, 2 or 3;  
 d is 0, 1 or 2; and  
 $X^1$  and  $X^2$  are each independently  $CH_2$  or O;  
 or a pharmaceutically acceptable salt or solvate thereof.

5

12. A method of treating a mammal infected with human immunodeficiency virus (HIV) comprising administering to said mammal an effective amount of a compound of Formula II:

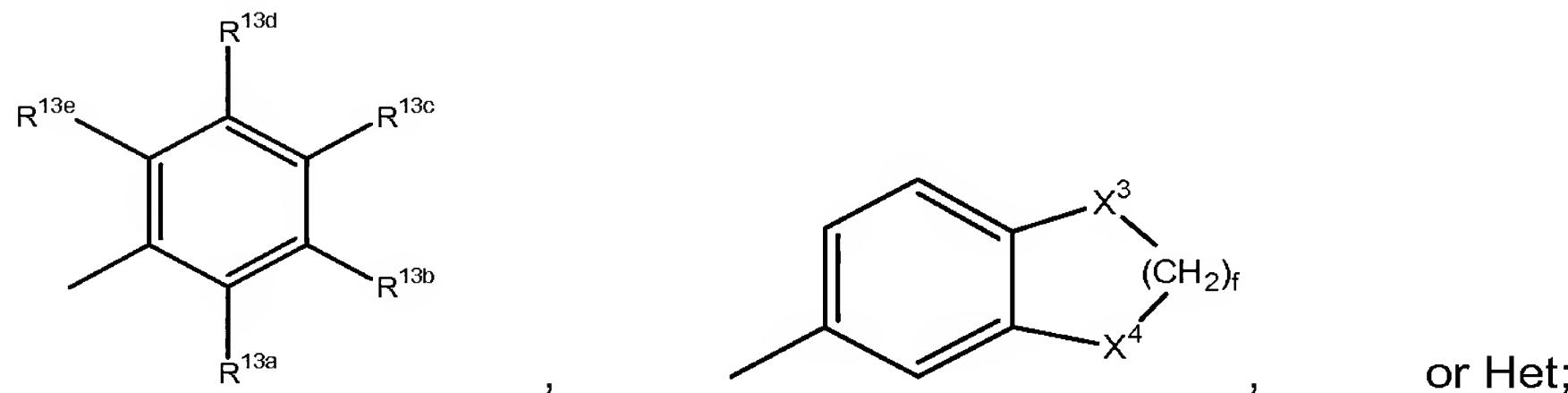


II

10

wherein:

$R^{10}$  is a group of the formula:



$R^{11}$  and  $R^{12}$  are each independently H or  $C_1-C_4$  alkyl, with the proviso that  $R^{11}$  and  $R^{12}$

15 are not both H;

$R^{13a}$ ,  $R^{13b}$ ,  $R^{13c}$ ,  $R^{13d}$ , and  $R^{13e}$  are each independently H,  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy,  $-(CH_2)_gOH$ , halo, trifluoromethyl, cyano,  $-(CH_2)_gNR^{14}R^{15}$ ,  $-CO(C_1-C_4\text{ alkyl})$ ,  $-OCO(C_1-C_4\text{ alkyl})$ ,  $-CH(OH)(C_1-C_4\text{ alkyl})$ ,  $-C(OH)(C_1-C_4\text{ alkyl})_2$ ,  $-SO_2NH_2$ ,  $-(CH_2)_gCONR^{16}R^{17}$  or  $-(CH_2)_gCOO(C_1-C_4\text{ alkyl})$ ;

20  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{17}$  are each independently H or  $C_1-C_4$  alkyl;

Het is pyridyl, pyrazinyl or thienyl;

e is 1, 2 or 3;

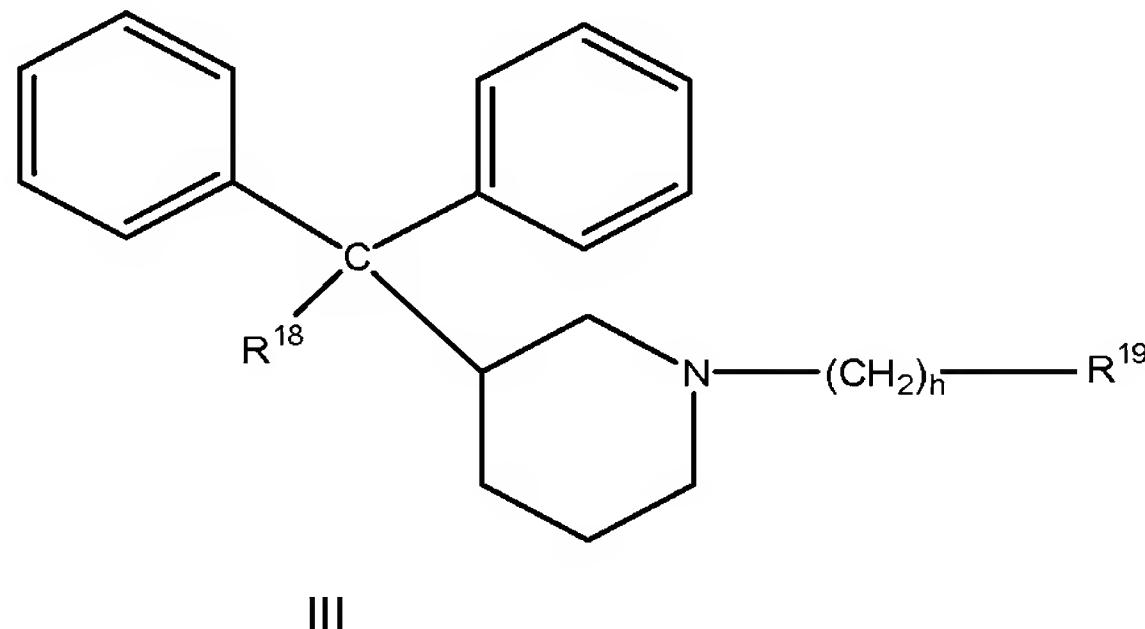
f is 1, 2 or 3;

g is 0, 1 or 2; and

25  $X^3$  and  $X^4$  are each independently  $CH_2$  or O;

or a pharmaceutically acceptable salt or solvate thereof.

13. A method of treating a mammal infected with human immunodeficiency virus (HIV) comprising administering to said mammal an effective amount of a compound of Formula III:



5 wherein:

$R^{18}$  is  $-CN$  or  $-CONR^{20}R^{21}$ ;

$R^{19}$  is  $C_3$ - $C_6$  cycloalkyl,  $C_3$ - $C_6$  heterocycloalkyl or  $(C_6$ - $C_{14}$  aryl) $-(C_1$ - $C_4$  alkyl) $_v$ ;

$R^{20}$  and  $R^{21}$  are each independently H or  $C_1$ - $C_4$  alkyl;

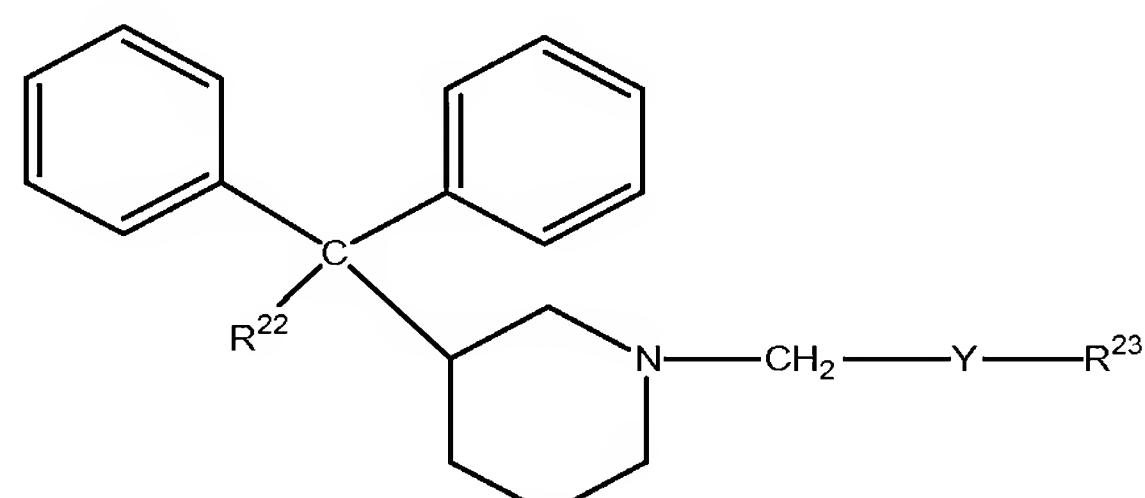
$h$  is 1, 2, 3 or 4; and

10  $v$  is 0, 1 or 2;

or a pharmaceutically acceptable salt or solvate thereof.

14. A method of treating a mammal infected with human immunodeficiency virus (HIV) comprising administering to said mammal an effective amount of a compound according to

15 Formula IV:

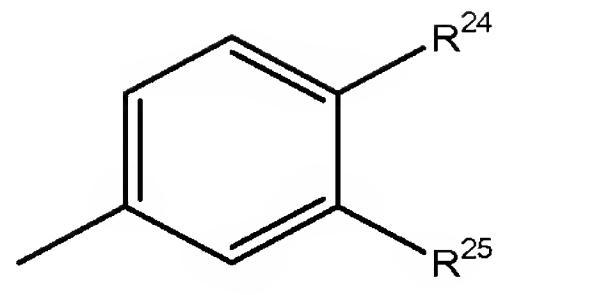


wherein:

20  $Y$  is a direct link,  $-CH_2-$ ,  $-(CH_2)_2-$ ,  $-CH_2O-$  or  $-CH_2S-$ ;

$R^{22}$  is  $-CN$  or  $-CONH_2$ ;

$R^{23}$  is a group of the formula:



wherein

5  $R^{24}$  and  $R^{25}$  are each independently H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, -(CH<sub>2</sub>)<sub>k</sub>OH, halo, trifluoromethyl, cyano, -(CH<sub>2</sub>)<sub>k</sub>NR<sup>26</sup>R<sup>27</sup>, -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -OCO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CH(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl), -C(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -(CH<sub>2</sub>)<sub>k</sub>CONR<sup>26</sup>R<sup>27</sup> or -(CH<sub>2</sub>)<sub>k</sub>COO(C<sub>1</sub>-C<sub>4</sub> alkyl);

$R^{26}$  and  $R^{27}$  are each independently H or C<sub>1</sub>-C<sub>4</sub> alkyl;

k is 0, 1 or 2;

$X^5$  and  $X^6$  are each independently O or CH<sub>2</sub>;

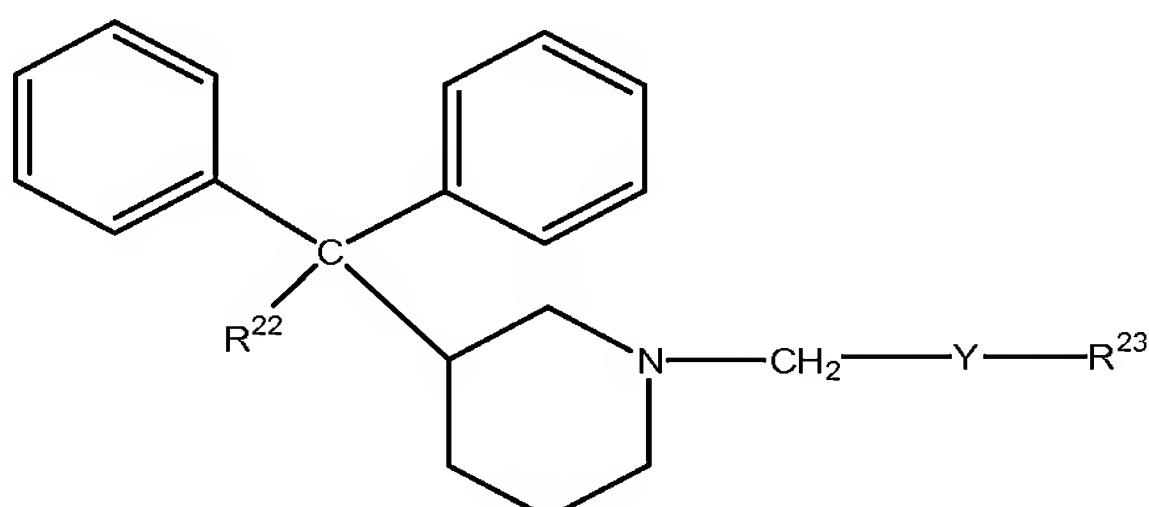
j is 1, 2 or 3; and

10 Het is pyridyl, pyrazinyl or thieryl;

or a pharmaceutically acceptable salt or solvate thereof.

15. A pharmaceutical composition that is effective in treating HIV in an infected mammal comprising a pharmaceutically acceptable carrier and an effective amount of a compound of

15 Formula IV:



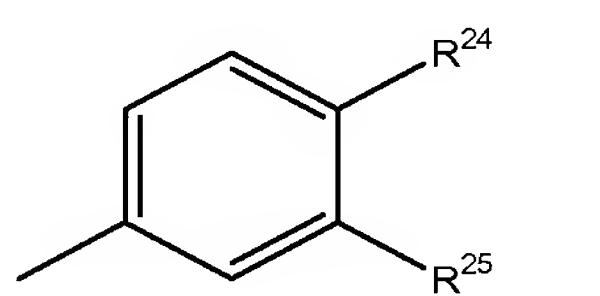
IV

wherein:

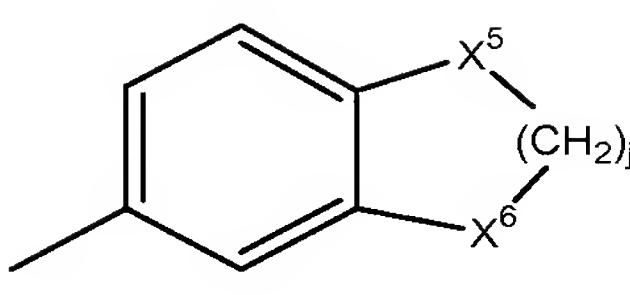
20 Y is a direct link, -CH<sub>2</sub>-, -(CH<sub>2</sub>)<sub>2</sub>-, -CH<sub>2</sub>O- or -CH<sub>2</sub>S-;

$R^{22}$  is -CN or -CONH<sub>2</sub>;

$R^{23}$  is a group of the formula:



wherein



or Het;

25

$R^{24}$  and  $R^{25}$  are each independently H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, -(CH<sub>2</sub>)<sub>k</sub>OH, halo, trifluoromethyl, cyano, -(CH<sub>2</sub>)<sub>k</sub>NR<sup>26</sup>R<sup>27</sup>, -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -OCO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CH(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl), -C(OH)(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -(CH<sub>2</sub>)<sub>k</sub>CONR<sup>26</sup>R<sup>27</sup> or -(CH<sub>2</sub>)<sub>k</sub>COO(C<sub>1</sub>-C<sub>4</sub> alkyl);

$R^{26}$  and  $R^{27}$  are each independently H or C<sub>1</sub>-C<sub>4</sub> alkyl;

5           k is 0, 1 or 2;

$X^5$  and  $X^6$  are each independently O or CH<sub>2</sub>;

j is 1, 2 or 3; and

Het is pyridyl, pyrazinyl or thieryl;

or a pharmaceutically acceptable salt or solvate thereof.